A Sticky Situation

A few years ago we came home from a weekend camping trip to discover 3 of our 6 horses had quills in their noses. Although my place is fenced with woven wire, the openings on the wire are apparently large enough that baby porcupines can pass through and get into the pasture. Horses are naturally curious creatures, and I suppose that having never before met a porcupine, they nuzzled it to see what it would do. Not being there at the time, I am not exactly sure what was the chain of events that resulted in 3 horses needing to learn this painful lesson.

We started the quill removal process by working on the smallest animal, a pony. It really wasn't too tough a job with her. She was small enough that two people could hold her while my husband used a pair of pliers to pull each of about 20 quills. Next we did the medium-sized horse, a very well trained animal who offered no resistance. Finally it was time for my big grey gelding. Weighing in at about 1200 pounds, his head towered over mine. Some of the quills were actually embedded inside his nostril. When the first quill was pulled, the poor guy lifted me off of my feet as I attempted to hold his halter. A matter of truly good fortune, we then discovered his love for horse treats was so great that if you fed him a treat, you could pull a quill without too might of a fight. I guess it made an impression on him, however, because for about two years afterwards he was very difficult to catch – although he still did like his treats.

One of my most interesting up close and personal encounters with porcupines happened during a camping trip. It was dark, and I heard an unfamiliar mewing sound from across the creek. Whatever it was, there were two of them, and they called back and forth to each other in what turned out to be the song of the porcupine. A mother and a baby, they eventually came together, and we were able to watch as the mother sat up on her hind legs and tail and allowed her baby to nurse, apparently undisturbed by our presence. I have had a fascination with the species ever since.

Porcupines are quite unusual members of the rodent family. The life history of most rodents involves large numbers of offspring and a high mortality rate. In contrast, porcupines seem to exist in the slow lane. They move slowly, lumbering across the ground, and although they are good climbers, are not particularly fast at it. They live relatively long lives for rodents, perhaps 5 – 7 years in the wild.

Female porcupines breed only once a year, and produce one pup, called a porcupette. They breed in the fall, and are in heat only 8 – 12 hours. They advertise their presence from the top of a tree by "screaming" and urinating. Porcupines do not see very well, but they have an excellent sense of smell, and the males travel a fair distance in search of mates. Males also scream during the mating season, and fight one another using their teeth and quills. The strongest, most persistent male wins the fight. The high pitched screams of fighting males are likened to the sound of wild cats.

Females gestate their young about 215 days, with the porcupette born in March or April. Quills are present on the pups, and become functional as soon as the baby dries. Weighing about a pound, for the first 6 weeks the porcupette cannot travel far, and young babies cannot climb trees above sapling size. The young babies are hidden on the ground, perhaps in the hollow base of a

tree, while the mother sleeps in the tree top during the day. The mother and baby meet only at night. As the porcupette gets older, there is more and more distance between the two, until eventually the connection ends as the next breeding season commences. Female porcupines are pregnant or nursing about 11 months out of the year, a reproductive commitment that occurs year after year without breaks.

Porcupines are perhaps best known by their quills, their defense mechanism. Quills are modified hairs that are equipped with microscopic barbs. The barbs are what cause a quill to pull deeper into flesh once something comes into contact with it. It is interesting to note that quills have a greasy coating that has an antibiotic property. It is theorized that this antibiotic is what helps to protect porcupines from the effects of their own quills. Porcupines have a tendency to fall from trees, being rather heavy, and often seeking food at the ends of branches. Sometimes when they fall, they become impaled by their own quills. The antibiotic reduces their chance of infection. Porcupines also get impaled by the quills of other porcupines when they fight. They are quite adept at removing quills, and do so with the use of their teeth and forefeet.

The porcupine's coat consists of short under fur, long guard hairs, and as many as 30,000 quills on their backs, sides, and tail. The quills lie flat, unless the porcupine is defending itself from predators, or fighting. I thought I would demonstrate this fact during a fifth grade field day one year, so I donned a heavy pair of gloves and carefully skinned out a porcupine I found killed on the road. It was not the most pleasant skinning job I have ever done. When you lay the skin flat, you can run your hand over the top of the guard hairs and not get poked; when you bend the skin, the quills immediately become obvious. The kids enjoyed the lesson, but taught me one when they grabbed quills from the pelt and spent the day running around, poking each other.

Porcupines are primarily vegetarian. In winter they mostly feed on the inner bark of trees. At this time of year, porcupines are mainly arboreal feeders. Porcupines are also attracted to salt, so may chew on odd items. They are attracted to the glue used in plywood, so can be a nuisance around buildings and signs. In the spring and summer porcupines shift more to ground feeding, and consume forbs, grasses, and wetland plants, as well as the new leaves of trees like aspen and birch. Porcupines are said to be not averse to swimming. I have never seen a porcupine swim, but I have seen one wade into the water in pursuit of water lilies.

I like porcupines. I am still charmed by their song. This interesting and important member of our forest communities can be seen most readily on the Chippewa National Forest during the leaf-off season. Just keep your eye peeled for large forms in the tree tops as you travel the forest roads, snowmobile trails, and shorelines of the lakes.

by Kelly Barrett, Wildlife Biologist
Chippewa National Forest